



# Montana Audubon

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Support of HB 586  
House Federal Relations, Energy, and Telecommunications Committee  
February 19, 2007

Mr. Chairman and Members of the Committee,

My name is Molly Immen and I am here today representing Montana Audubon. Our organization has approximately 4,000 members belonging to ten local chapters.

Montana Audubon routinely works on issues that protect birds and other wildlife from environmental hazards. Mercury has a clear, measurable impact on many fish and wildlife species. Therefore, we are asking the House Federal Relations, Energy, and Telecommunications Committee to pass HB 586.

1. Fish. In Montana, there are 418,836.80 acres of lakes and 1,280 miles of streams that are impaired due to mercury contamination. Montana has statewide fish advisories for northern pike, lake trout, and walleye. These advisories warn anglers against eating these fish due to mercury contamination. There are also numerous other advisories around the state that warn children and women of childbearing age not to eat other types of fish due to high levels of mercury (*Montana Sport Fish Consumption Guidelines*, MT Dept. of Fish, Wildlife and Parks, 2005). Methylmercury is concentrated as it moves up the food chain because each fish eats a number of smaller fish contaminated with the compound. These animals can only eliminate the compound very slowly.
2. Birds in General. This air quality issue directly affects birds. In a recent study by the US Fish and Wildlife Service in the Adirondacks, about 1/5 of the Common Loons caught and tested had mercury levels high enough to endanger breeding. Other water birds with documented high mercury levels in the United States include Snowy Egrets, Royal Terns, Clapper Rails, Herring Gulls, Brown Pelicans, Ring-necked Pheasants, and Mallards. A recent study in the *Journal of Ecotoxicology* (Volume 14, pp. 223-240, 2005) shows that scientists are also alarmed to find that forest songbirds in the northeastern North America have high levels of methylmercury. The levels found were high enough to interfere with reproductive rates. The scientists theorize that the emissions from upstream coal-fired power plants deposit mercury on leaves, which in turn are consumed by the food source for the songbirds. Science has not yet focused on other species that may be equally impaired.
3. Birds in Montana.
  - Bald Eagles. In the last year in Montana, 10-12 Bald Eagles have been found with mercury poisoning. Two of these birds died. Timing suggests that all toxicity was incurred in Montana. Consequently, the Montana Bald Eagle Working Group has initiated studies on Bald Eagles and Osprey to determine how widespread this problem is. (Dr. Al Harmata, Dept. of Ecology, Montana State University, written communication).
  - Loons. According to a 2005 Common Loon Report for Montana, the average blood, feather and egg mercury levels found in Montana's adult breeding loons were higher than levels found in

loons breeding in other parts of the Northwestern United States. Several of the individuals tested "contained high enough levels of HG to be considered to have a negative impact on loons" (*Draft Third Annual Common Loon Report (2002-2004)*, Montana Fish, Wildlife and Parks, 2005).

We are particularly concerned about mercury pollution from Montana power plants because of the recent EPA study that was released by Matt Landis that found that 70 percent of the mercury in rain collected at a study site in Ohio was from nearby coal-burning industrial plants. The bottom line is that local coal plants pollute local landscapes. In Montana, our fish and wildlife are already showing signs that mercury is a problem. We do not want to aggravate that problem—for fish and wildlife found in Montana (or in other states).

Although recent reports on mercury have focused on the dangers to humans, some researchers feel that public health could be better guarded if standards were enforced that protect wildlife. Gary Heinz, a research biologist with the U.S. Geological Survey (USGS) at the Patuxent Wildlife Research Center in Laurel, Md., has found that some bird species are much more sensitive than humans to mercury (*Environmental Science and Technology Online News*, American Chemical Society, November 10, 2004). Human dietary guidelines for mercury range from a high of 1.0 parts per million (ppm) in the United States to a low of 0.4 ppm in Japan. However, birds can show ill effects at much lower dietary concentrations than humans. Mallard ducks, for instance, experience harmful influences to eggs when fed as little as 0.1 ppm of methylmercury, while ring-necked pheasants show effects at 0.2 ppm. Yet, only four species of birds have been well studied, because captive breeding experiments with wild animals are both daunting and expensive, say USGS researchers. Heinz has used direct injection of methylmercury into eggs as a quick and effective means to test chick mortality in 20 bird species. While mallards have increased chick mortality at 0.8–1.0 ppm, the most sensitive species is the white ibis, whose chicks begin dying at methylmercury concentrations of only 0.1 ppm. He also notes that these are mercury levels that birds are likely to encounter in the wild.

Symptoms include: Waterfowl may be exposed to chronic low levels of mercury present as an environmental contaminant. Mercury has been reported to cause abnormal egg laying behavior, impaired reproduction, slowed duckling growth, and altered duckling behavior in mallard ducks. Major bird die-offs from mercury poisoning are rarely reported. Mortality from mercury is more of an insidious problem involving scattered mortalities. More commonly, wildlife suffers from sub-lethal effects. Clinical signs of mercury poisoning in birds have been documented, and they include incoordination, tremors, weakness, ruffled feathers, and drooping eyelids. In free-ranging birds, most cases of mercury poisoning are probably more insidious, resulting in an emaciation syndrome, and a variety of sublethal effects. Prevention of exposure is required to control the lethal and sublethal effect of mercury poisoning in bird populations.

Absorption from the gut is so rapid that treatment of wildlife is usually not practical. Control of mercury poisoning in wildlife is aimed at reducing the presence of mercury as an environmental contaminant. Although wildlife deaths due to mercury poisoning are rare, there is a possibility that mercury may reduce populations by decreasing reproductive efficiency.

We have a unique opportunity to create a state rule that requires coal-fired power plants to control mercury emissions. The state already has a problem. It is simply unnecessary to make it worse.